Decathlon Series Gas Fryers (CE)

Installation & Operation Manual

D20, D50, D60 & D80 Series

CE ONLY

DEAN

8195706

Service Hotline 1-318-865-1711

Price: $10.00

819-5706
JUNE 2002

Please read all sections of this manual and retain for future reference.

NOTICE

This appliance is intended for professional use only and is to be operated by qualified personnel only. A Dean Factory Authorized Service Center (FASC) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty. See Chapter 1 of this manual for definitions of qualified personnel.

NOTICE

This equipment must be installed in accordance with the appropriate national and local codes of the country and/or region in which the appliance is installed.

NOTICE

Drawings and photos used in this manual are intended to illustrate operational, cleaning and technical procedures and may not conform to onsite management operational procedures.

NOTICE TO OWNERS OF UNITS EQUIPPED WITH COMPUTERS

U.S.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation. While this device is a verified Class A device, it has been shown to meet Class B limits.

Canada

This digital apparatus does not exceed the Class A or B limits for radio noise emissions as set out by the ICES-003 standard of the Canadian Department of Communications.

Cet appareil numerique n'emet pas de bruits radioelectriques depassany les limites de classe A et B prescrites dans la norme NMB-003 edictee par le Ministre des Communications du Canada.

⚠ DANGER

Improper installation, adjustment, maintenance or service, and unauthorized alterations or modifications can cause property damage, injury, or death. Read the installation, operating and service instructions thoroughly before installing or servicing this equipment. Only qualified service personnel may convert this appliance to use a gas other than that for which it was originally configured. See Chapter 1 of this manual for definition of qualified service personnel.

⚠ DANGER

Adequate means must be provided to limit the movement of this appliance without depending upon the gas line connection. Single fryers equipped with legs must be stabilized by installing anchor straps. All fryers equipped with casters must be stabilized by installing restraining chains. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

⚠ DANGER

The front ledge of the fryer is not a step. Do not stand on the fryer. Serious injury can result from slips or contact with the hot oil.

⚠ DANGER

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

⚠ DANGER

Instructions to be followed in the event the operator smells gas or otherwise detects a gas leak must be posted in a prominent location. This information can be obtained from the local gas company or gas supplier.

⚠ DANGER

The crumb tray in fryers equipped with a filter system must be emptied into a fireproof container at the end of frying operations each day. Some food particles can spontaneously combust if left soaking in certain shortening material. Additional information can be obtained in the filtration manual included with the system.

⚠ WARNING

No structural material on the fryer should be altered or removed to accommodate placement of the fryer under a hood. Questions? Call the Dean Service Hotline at 1-800-551-8633.

⚠ WARNING

Do not bang fry baskets or other utensils on the fryer's joiner strip. The strip is present to seal the joint between the frypot. Banging fry baskets on the strip to dislodge shortening will distort the strip, adversely affecting its fit. It is designed for a tight fit and should only be removed for cleaning.

IMPORTANT

Safe and satisfactory operation of Dean equipment depends upon its proper installation. Installation MUST conform with local codes, or in the absence of local codes, to European Community (CE) Standards.

NOTICE

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS ENODIS EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM FRYMASTER/DEAN, OR ANY OF ITS AUTHORIZED SERVICE CENTERS, AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, FRYMASTER/DEAN AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS, DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICE CENTER.

DEAN

Decathlon Series Gas Fryers (CE)

Installation & Operation Manual

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DECATHLON SERIES GAS FRYERS (CE)
CHAPTER 1: INTRODUCTION

1.1 Applicability and Validity

The Dean Decathlon Series gas model family has been approved by the European Union (EU) for sale and installation in the following EU countries: AT, BE, KE, KD, ES, FI, FR, GB, IE, IT, LU, NL, NO, PT and SE.

This manual is applicable to and valid for all Dean Decathlon gas units sold in English-speaking countries, including those in the European Union. Where conflicts exist between instructions and information in this manual and local or national codes of the country in which the equipment is installed, installation and operation shall comply with those codes.

This appliance is only for professional use and shall be used by qualified personnel as defined in Section 1.7.

1.2 After Purchase

In order to improve service, have the following chart filled in by the Dean Authorized Service Technician who installed this equipment.

Authorized Service Technician/FASC _____

Address _____

_____

Telephone/Fax _____

Model Number _____

Serial Number _____

Gas Type _____

1.3 Ordering Parts

Customers may order parts directly from their local factory authorized service center. For this address and phone number, contact your factory authorized service center or call the Dean Service Hotline phone number, 1-800-551-8633.

To speed up your order, provide the model number, serial number, gas type, part needed, item part number (if known), and quantity needed.

1.4 Service Information

Call the Dean Service Hotline, 1-800-551-8633, for the location of your nearest factory authorized service center. To assist you more efficiently, always provide the service technician with the model number, gas type, serial number, and the nature of the problem.

1.5 Computer Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. While this device is a verified Class A device, it has been shown to meet the Class B limits. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If necessary, the user should consult the dealer or an experienced radio and television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

1.6 Safety Information

Before attempting to operate your unit, read the instructions in this manual thoroughly.

Throughout this manual, you will find notations enclosed in double-bordered boxes similar to the ones below.

CAUTION boxes contain information about actions or conditions that ***may cause or result in a malfunction of your system*.**

⚠ CAUTION
Example of a CAUTION box.

1.6 Safety Information (cont.)

WARNING boxes contain information about actions or conditions that ***may cause or result in damage to your system***, and which may cause your system to malfunction.

⚠ WARNING
Example of a WARNING box.

DANGER boxes contain information about actions or conditions that ***may cause or result in injury to personnel***, and which may cause damage to your system and/or cause your system to malfunction.

⚠ DANGER
Hot cooking oil causes severe burns. Never attempt to move a fryer containing hot cooking oil or to transfer hot cooking oil from one container to another.

1.7 Service Personnel

1.7.1 Definitions

A. Qualified and/or Authorized Operating Personnel

1. Qualified/authorized operating personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions, or have had previous experience with the operation of equipment covered in this manual.

B. Qualified Installation Personnel

1. Qualified/authorized personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions, or who have had previous experience with the operation of the equipment covered in this manual.

C. Qualified Service Personnel

1. Qualified service personnel are those who are familiar with Dean equipment and have been authorized by Dean to perform service on Dean equipment. All authorized service personnel are required to be equipped with a complete set of service parts manuals and stock a minimum amount of parts for Dean equipment. A list of Dean Factory Authorized Service Centers (FASCs) was included with the fryer when shipped from the factory. ***Failure to use qualified service personnel will void the Dean warranty on your equipment.***

DECATHLON SERIES GAS FRYERS (CE)
CHAPTER 2: IMPORTANT INFORMATION

2.1 Receiving and Unpacking Equipment

A. Check that the container is upright. Use an outward prying motion - ***no hammering*** - to remove the carton. Unpack the fryer carefully and remove all accessories from the carton. Do not discard or misplace these, as they will be needed.

B. After unpacking, immediately check the equipment for visible signs of shipping damage. If damage has occurred, contact the carrier and file the appropriate freight claims. Do not contact the factory. Shipping damage responsibility is between the carrier and the dealer.

If your equipment arrives damaged:

1. File claim for damages immediately, regardless of extent of damage.

2. Visible loss or damage: Be sure this is noted on the freight bill or express receipt and is signed by the person making the delivery.

3. Concealed loss or damage: If damage is unnoticed until equipment is unpacked, notify freight company or carrier immediately, and file a concealed damage claim. This should be done within 15 days of date of delivery. Be sure to retain container and all packing materials for inspection.

NOTE: Dean Does Not Assume Responsibility for Damage or Loss Incurred in Transit.

C. **Frying systems with built-in filtration:** Take off the filter support brace and remove the filter pan from the cabinet.

D. Remove all plastic skin from sides, front, and doors of the fryer(s). Failure to do this prior to initial fryer operation will make it very difficult to remove later.

2.2 General

Qualified, licensed, and/or authorized installation or service personnel only (as defined in Section 1.7) should perform the following:

?? **Installation and service on Dean equipment.**

?? **Conversion of this appliance from one gas type to another.**

Failure to use qualified, licensed, and/or authorized installation or service personnel to install, convert to another gas type or otherwise service this equipment will void the Dean warranty and may result in damage to the equipment or injury to personnel.

2.2 General (cont.)

Where conflicts exist between instructions and information in this manual and local code or national codes, or regulations, installation and operation shall comply with the codes or regulations in force in the country in which the equipment is installed.

⚠ CAUTION
Building codes prohibit a fryer with its open tank of hot oil/shortening from being installed beside an open flame of any type, including those of broilers and ranges.

Upon arrival, inspect the fryer carefully for visible or concealed damage. (See Receiving and Unpacking Equipment in Section 2.1.)

⚠ CAUTION
Dean appliances equipped with legs are for stationary installations. Appliances fitted with legs must be lifted during movement to avoid damage to the appliance and bodily injury. For moveable installations, optional equipment casters must be used. Questions? Call 1-800-551-8633.

2.2.1 Product Description

Dean Decathlon Series gas fryers are energy efficient, tube-style, gas-fired units. All units are shipped completely assembled with accessories packed inside the frypot. All units are adjusted, tested and inspected at the factory before shipment. Sizes, weights and input rates of all models are listed in this manual.

NOTE: The on-site supervisor is responsible for ensuring that operators are made aware of inherent dangers of operating a deep fat fryer, particularly aspects of oil filtration, draining, and cleaning of the fryer.

2.3 Principles of Operation

The incoming gas flows through orifices and is mixed with air in the burners to create the correct ratio for proper combustion. The mixture is ignited at the front end of each heat tube by the pilot light. Internal diffusers slow the flame as it goes through the burner tube. This slower and more turbulent flame gives much better heat transfer to the walls of the tubes, thereby heating the oil better.

2.4 Rating Plate

This is attached to the inside right-hand corner of the front door panel. Information provided includes the model and serial number of the fryer, kW/hr (BTU/hr) of the burners, outlet gas pressure in mbars (inches W.C.) and whether the unit has natural or propane gas orifices.

⚠ DANGER
Fryers MUST be connected ONLY to the gas type identified on the attached rating plate.

2.5 Pre-Installation

⚠ DANGER
No structural material on the fryer should be altered or removed to accommodate placement of the fryer under a hood. Questions? Call the Frymaster/Dean Service Hotline at 1-800-551-8633.

⚠ DANGER
Do not connect this appliance to the gas supply before reviewing all information in this chapter.

A. **General**: Only licensed personnel (as defined in Section 1.7) should install any gas-fired equipment.

1. A manual gas shut-off valve must be installed in the gas supply line ahead of the fryers for safety and ease of future service.

2. Dean Decathlon Series (CE) gas fryers require 230VAC single-phase 50-hertz (International/CE) electrical service and are equipped with a 16-3 SJT grounded flexible power cord for a direct connection to the power supply. Amperage draw for each unit depends on the accessories supplied with the unit/system.

B. **Clearances**: The fryer area must be kept free and clear of all combustibles. This unit is design-certified for the following installations:

1. Commercial installation only (not for household use).

2. Non-combustible floor installation equipped with factory-supplied 15-cm (6-inch) adjustable legs or 13-cm (5-inch) casters;

2.5 Pre-Installation (cont.)

3. Combustible construction with a minimum clearance of 15-cm (6-inch) side and 15-cm (6-inch) rear, and equipped with factory-supplied 15-cm (6-inch) adjustable legs or 13-cm (5-inch) casters.

⚠ DANGER
Local building codes prohibit a fryer with its open tank of hot oil from being installed beside an open flame of any type, including those of broilers and ranges.

C. **Installation Standards**

1. CE/EXPORT STANDARDS: Fryer installation must conform with local codes, or in the absence of local codes, to the appropriate national or European Community (CE) standards.

2.6 Air Supply and Ventilation

⚠ DANGER
This appliance must be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to the health of personnel in the room in which it is installed.

Keep the area around the fryer clear to prevent obstruction of combustion and ventilation airflow as well as for service and maintenance.

A. Do not connect this fryer to an exhaust duct.

B. Correct installation and adjustment will ensure adequate airflow to the fryer system.

C. A commercial, heavy-duty fryer must vent its combustion wastes to the outside of the building. A deep-fat fryer must be installed under a powered exhaust hood, or an exhaust fan must be provided in the wall above the unit, as exhaust gas temperatures are approximately 427-538°C (800-1000°F). Check air movement during installation. Strong exhaust fans in the exhaust hood or in the overall air conditioning system can produce slight air drafts in the room.

D. Do not place the fryer's flue outlet directly into the plenum of the hood, as it will affect the gas combustion of the fryer.

E. Never use the interior of the fryer cabinet for storage or store items on shelving over or behind the fryer. Exhaust temperatures can exceed 427ºC (800°F) and may damage or melt items stored in or near the fryer.

2.6 Air Supply and Ventilation (cont.)

F. Adequate distance must be maintained from the flue outlet of the fryer(s) to the lower edge of the filter bank. Per NFPA Standards No. 96, a minimum of 45-cm (18-inches) should be maintained between the flue(s) and the lower edge of the exhaust hood filter.

G. Filters and drip troughs should be part of any industrial hood, but consult local codes before constructing and installing any hood. The duct system, the exhaust hood and the filter bank must be cleaned on a regular basis and kept free of grease.

2.7 Equipment Installed at High Altitudes

A. The fryer input rating [kW/hr (BTU/hr)] is for elevations up to 610-m (2000 feet). For elevations above 610-m (2000 feet), the rating should be reduced 4 percent for each additional 305-m (1000 feet) above sea level.

B. The correct orifices are installed at the factory if operating altitude is known at time of the customer's order.

2.8 Conversion of Units

Pressure:
1 mbar = 10,2 mm W.C. = 0,4-inch W.C.
20 mbar = 204 mm W.C. = 8-inch W.C.
1-inch W.C. = 25,4 mm W.C. = 2,5 mbar

Heat Input:
1 kW = 3410 BTU/hr
100 BTU/hr = 0,0293 kW

Temperature:
0° Celsius = 32° Fahrenheit
Temperature in degrees Celsius = (Temperature in degrees Fahrenheit (F) – 32) x 0,555
100° Celsius = (212° Fahrenheit – 32) x 0,555

DECATHLON SERIES GAS FRYERS (CE)
CHAPTER 3: INSTALLATION

3.1 Installing the Fryer

A. Initial Installation: If the fryer is installed with legs, do not push the fryer to adjust its position. Use a pallet or lift jack to lift the fryer slightly, then place the fryer where it is to be installed.

B. Relocating the fryer: Remove all weight from each leg before moving a fryer with legs installed. Do not slide the fryer on the legs.

C. If a leg becomes damaged, contact your service agent for immediate repair/replacement.

3.2 Leveling the Fryer (Fryers equipped with legs only)

A. **All Installations**: If the floor is uneven or has a definite slope, place the fryer on an even platform.

B. Place a carpenter's spirit level across the top of the fryer and level the unit both front-to-back and side-to-side. If it is not level, the unit may not function efficiently, the oil may not drain properly for filtering and in a line-up it may not match adjacent units.

C. Adjust to the high corner and measure with the spirit level. If floor is uneven, level the unit with the screw adjustments on each leg (**ensure minimum clearances as discussed in Chapter 2 are maintained during the leveling procedure**).

D. **Re-leveling**: If the fryer is moved, re-level the fryer following the above instructions.

E. The install must be reviewed at the time of installation to ensure it meets the intent of these instructions.

⚠ CAUTION
Fryers must be at room temperature, empty of oil, and if fitted with legs, lifted during movement to avoid damage and possible bodily injury.

⚠ DANGER
Hot shortening can cause severe burns. Avoid contact. Under all circumstances, oil must be removed from the fryer before attempting to move it to avoid oil spills, and the falls and severe burns that could occur. This fryer may tip and cause personal injury if not secured in a stationary position.

3.3 Installing Casters and Legs

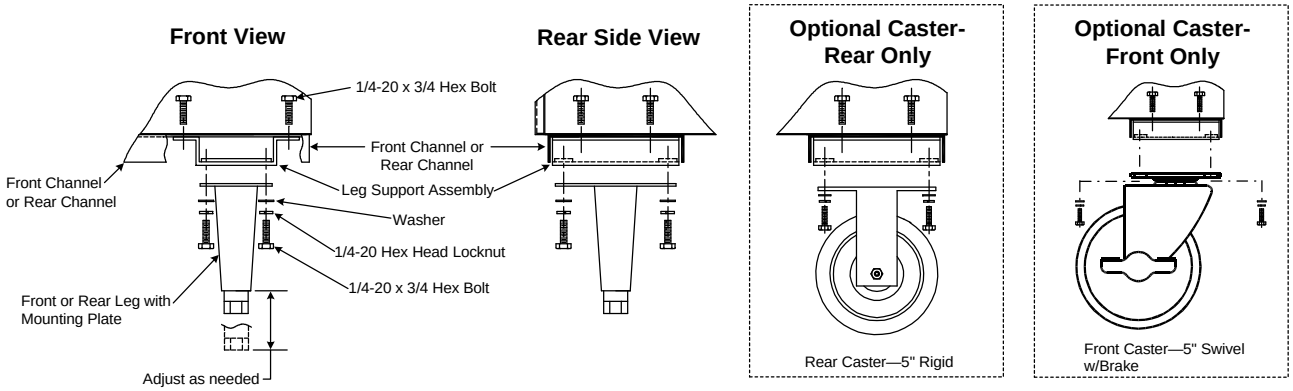
A. Install casters and/or legs near where the fryer is to be used, as neither is secure for long transit. Decathlon Series (CE) gas fryers cannot be curb mounted and must be equipped with either legs or casters provided.

B. After unpacking, use a pallet or lift jack to raise the unit before installing the casters.

C. Align the caster or leg base holes with the leg support assembly and insert bolt. Install the washers and nut hand tight, and repeat for all four holes in caster/leg base assembly.

D. Tighten the caster/leg against the leg support assembly by using appropriate tools. Ensure that all four bolts are evenly tightened. Tighten the bolts to 5.65 Nm (50 inch-lbs.) torque.

E. **For fryers with casters, there are no built-in leveling devices**. The floor where the fryers are installed must be level.



Caster/Leg Installation and Adjustment

NOTE: The installation must be inspected after it is complete to ensure it meets the intent of these instructions. The on-site supervisor and/or operator(s) should be informed that the appliance is installed with restraints. If restraints are removed to move fryer (cleaning beneath and behind, relocation, etc.), ensure the restraints are re-installed when fryer is returned to its permanently installed position.

⚠ WARNING

Dean fryers equipped with legs are for permanent installations. Fryers fitted with legs must be lifted during movement to avoid damage and possible bodily injury. For a moveable or portable installation, Dean optional equipment casters must be used. Questions? Call 1-800-551-8633

3.4 Gas Categories

Installation shall be made with a gas connector that complies with national and local codes. Quick disconnect devices, if used, shall likewise comply with national and local codes.

⚠ WARNING

The fryer MUST be connected to the gas supply specified on the rating and serial number plate located on the back of the fryer door.

⚠ WARNING

If gas odors are detected, the gas supply MUST be shut off at the main shut-off valve. The local gas company or FASC should be contacted immediately to rectify the problem.

Dean Decathlon Series gas fryers have obtained CE markings for countries and gas categories listed in the table below:

Countries	Supply Pressures and Gas (mbar)		Appliance Categories	Countries	Supply Pressures and Gas (mbar)		Appliance Categories
BE Belgium	G20 G31	20/25 37	I2E (R) B I3P	GR Greece	G20 G31	20 37 and 50	II2H3P
DE Germany	G20 G31	20 50	I2E I3P	IR Ireland	G20 G31	20 37	II2H3P
DK Denmark	G20	20	I2H	IT Italy	G20	20	I2H
ES Spain	G20 G31	20 37 and 50	II2H3P	LU Luxembourg	G20/G25 G31	20/25 50	II2E3P
FR France	G20/G25 G31	20/25 37 and 50	II2ESI3P	NL The Netherlands	G25 G31	25 50	II2L3P
GB Great Britain	G20 G31	20 37	II2H3P	PT Portugal	G20 G31	20 37	II2H3P

3.5 Gas Connections

⚠ DANGER
Before connecting new pipe to this appliance the pipe must be blown out thoroughly to remove all foreign material. Foreign material in the burner and gas controls will cause improper and dangerous operation.

A. The gas supply (service) line must be the same size or greater than the fryer inlet line. This fryer is equipped with a 22 mm (3/4") male inlet. The gas supply line must be sized to accommodate all the gas-fired equipment that may be connected to that gas supply. Consult your contractor, gas company, supplier, or other knowledgeable authorities.

Recommended Gas Supply Line Sizes			
Gas Types	**Number of Fryers**		
	1	2 to 3	4 or more (*)
G20 and G25	22 mm (3/4")	28 mm (1")	35 mm (1-1/4")
G31	15 mm (1/2")	22 mm (3/4")	28 mm (1")
(*) When exceeding 6 meters (18 feet) for a configuration of more than four fryers, it is necessary to provide a 35 mm (1-1/4") rigid gas connection.			

⚠ DANGER
All connections must be sealed with a joint compound suitable for the gas being used and all connections must be tested with a solution of soapy water before lighting any pilots.

Never use matches, candles, or any other ignition source to check for leaks. If gas odors are detected, shut off the gas supply to the appliance at the main shut-off valve and immediately contact the local gas company or an authorized service agency for service.

⚠ DANGER
"Dry-firing" your unit will cause damage to the frypot and can cause a fire. Always ensure that melted shortening, cooking oil or water is in the frypot before firing the unit.

B. Rigid Connections: Check any installer-supplied intake pipe(s) visually and clean threading chips, or any other foreign matter before installing into a service line. If the intake pipes are not clear of all foreign matter, the orifices will clog when gas pressure is applied. Seal pipe joints with a sealant resistive to G31 gas. When using thread compound on gas piping, use very small amounts and only on male threads. Use a pipe thread compound that is not affected by the chemical action of G31 gases. DO NOT apply thread compound to the first two pipe threads—doing so will cause clogging of the burner orifices and control valve.

3.5 Gas Connections (cont.)

C. Manual shut-off valve: This gas service supplier-installed valve must be installed in the gas service line ahead of the fryers in the gas stream and in a position where it can be reached quickly in the event of an emergency.

D. Regulating Gas Pressure: The fryer and shut-off valve must be disconnected from the gas supply during any pressure testing of the system.

1. External gas regulators are not normally required on this fryer. A safety control valve protects the fryer against pressure fluctuations. If the incoming pressure is in excess of 3,45 kPa/35,0 mbar (½" PSI), **a step-down regulator will be required**.

⚠ DANGER
When pressure-testing incoming gas supply lines, disconnect the fryer from the gas line if the test pressure is 3,45 kPa [½" PSI (14 inches W.C.)] or greater to avoid damage to the fryer's gas piping and gas valve(s).

E. Manifold Pressure: Your local service technician should check the manifold pressure with a manometer**.**

1. Check the rating plate for manifold gas pressures. G20-G25 gas units normally require 10,0 mbar, and G31 units normally require 27,5-mbar gas pressure.

2. Confirm that the arrow forged into the bottom of the regulator body, which indicates gas flow direction, is pointed downstream towards the fryers. The air vent cap is also part of the regulator and should not be removed.

3. If a vent line from the gas pressure regulator is used, it should be installed in accordance with local codes or in the absence of local codes, with the appropriate national or European Community (CE) standards.

F. Regulators can be adjusted in the field, but it is recommended that they not be tampered with unless the part is known to be out of adjustment or serious pressure fluctuations are found to exist and can be solved no other way.

G. Only qualified service personnel should make adjustments to the regulators.

3.5 Gas Connections (cont.)

H. Orifices: The fryer can be configured to operate on any available gas. The correct safety control valve, appropriate gas orifices, and pilot burner are installed at the factory. While the valve can be adjusted in the field, only qualified service personnel should make any adjustments with the proper test equipment.

1. The following color codes indicate the type of gas to be used for each fryer and associated components.

Gas Type	CE Color Code
G20 and G25	Blue
G31	Red

⚠ WARNING
Use a diluted soap solution to find gas leaks when making new connections.

⚠ WARNING
If gas odors are detected, the gas supply must be shut off at the main shut-off valve. The local gas company or FASC should be contacted immediately to rectify the problem.

I. Flexible Couplings, Connectors and Casters

1. If the fryer is to be installed with flexible couplings and/or quick-disconnect fittings, the installer must use a heavy-duty certified commercial flexible connector of at least 22 mm NPT (with suitable strain-relief attachments), in compliance with local codes or in the absence of local codes, with the appropriate national or European Community (CE) standards. Quick-disconnect devices must comply with local codes or in the absence of local codes, with the appropriate national or European Community (CE) standards.

2. For an appliance equipped with casters, the installation shall be made with a connector that complies with local codes or in the absence of local codes, with the appropriate national or European Community (CE) standards.

3. Under no circumstances are the connector and the quick-disconnect device, or its associated piping to be used to limit fryer movement. A restraining bracket is provided on the appliance structural back to prevent the unit from moving from its installed position.

⚠ WARNING
Do not attach accessories to this fryer unless fryer is secured from tipping. The fryer may become unstable, tip over and cause injury.

3.5 Gas Connections (cont.)

4. To limit movement of the fryer, restraints independent of the flexible coupling or connector must be used. Clips are located on the back panel of the fryer for the attachment of restraints.

5. If disconnection of the restraint is necessary, the restraint must be reconnected after the fryer has been returned to its originally installed position.

J. After hook up, bleed the gas line of air to ensure that the pilot light will ignite quickly and evenly.

K. CE Standards: If the unit is to be installed with flexible coupling, use a commercial flexible coupling certified as NF D 36123 (or other national standard) or a quick disconnect device certified NF D 36124 (or other national standard).

3.6 Adjustments/Adaptation To Different Gases

⚠ WARNING

Qualified personnel MUST perform any adaptation, modification, or gas conversion, if required. Failure to use qualified personnel will void the Dean warranty.

A. Proper operation of appliances requires operator to inspect the following adjustments in terms of:

1. Gas inputs and pressures.

2. Voltage and polarities of electrical power supplies.

B. Dean gas fryers are manufactured to use the type of gas and pressure specified on the rating plate. When changing to a different gas, **adaptation must be performed by qualified personnel.** Failure to use qualified personnel will void the Dean warranty.

⚠ WARNING

If gas odors are detected, the gas supply MUST be shut off at the main shut-off valve, and the local gas company or authorized service agency contacted for immediate service.

3.6.1 CE Specifications

3.6.1.1 Gas Types and Specifications

MODEL*	NOMINAL HEAT INPUT- Qn (kW)	GAS TYPE	ORIFICE SIZE (MM)†	ORIFICE PART NO.	ORIFICE QTY/ COLOR
D 80 G	37,5	G20 G25 G31	2,40 2,40 1,51	810-2060 810-2060 810-2059	5/BLUE 5/BLUE 5/RED
D 60 G	37,5	G20 G25 G31	2,40 2,40 1,51	810-2060 810-2060 810-2059	5/BLUE 5/BLUE 5/RED
D 50 G	30,0	G20 G25 G31	2,40 2,40 1,51	810-2060 810-2060 810-2059	4/BLUE 4/BLUE 4/RED
D 20 G	15,0	G20 G25 G31	2,40 2,40 1,51	810-2060 810-2060 810-2059	2/BLUE 2/BLUE 2/RED

3.6.1.2 Adjustments to Different Gas Types

MODEL*	ORIFICE SIZE (MM)†	GAS TYPE	GAS PRESSURE AT REGULATOR		BURNER MARKING	PILOT MARKING
			MBAR	INCH W.C.		
D 80G	2,40 2,40 1,51 2,40**(1)**	G20 G25 G31 G25**(1)**	10,0 15,0 27,0 10,0**(1)**	4,0 6,0 10,8 4,0**(1)**	Blue Blue Red Blue	26N 26N 16LP 26N
D 60G	2,40 2,40 1,51	G20 G25 G31	10,0 15,0 27,0	4,0 6,0 10,8	Blue Blue Red	26N 26N 16LP
D 50G	2,40 2,40 1,51	G20 G25 G31	10,0 15,0 27,0	4,0 6,0 10,8	Blue Blue Red	26N 26N 16LP
D 20G	2,40 2,40 1,51	G20 G25 G31	10,0 15,0 27,0	4,0 6,0 10,8	Blue Blue Red	26N 26N 16LP

*D prefix- Decathlon Series
*G suffix- gas frying system
†Orifice size listed is for fryers operating at altitudes of 2000 feet or less.
(1) The Netherlands (NL) only.

3.6.1.2 Adjustments to Different Gas Types (cont.)

NOTE: Outlet gas pressure must be adjusted strictly within the above requirements 5 to 10 minutes after the appliance is operating.

* For controls and adjustments, please refer to "gas valve" illustration on page 3-10. (Pilot Flame Adjustment: Turn the pilot adjustment screw clockwise/counter-clockwise until the desired flame-volume is achieved).

3.6.2 Gas Conversion Procedures

⚠ DANGER

This appliance was configured at the factory for a specific type of gas. Converting from one gas type to another requires the installation of specific gas-conversion components.

Switching to a different type of gas without installing the proper conversion components may result in fire or explosion. NEVER ATTACH THIS APPLIANCE TO A GAS SUPPLY FOR WHICH IT IS NOT CONFIGURED!

Conversion of this appliance from one type of gas to another should only be performed by qualified, licensed, and authorized installation or service personnel, as defined in Section 1.7 of this manual.

See page 3-10 for gas valve illustration when performing the following conversions.

When converting from G20 to G25 gas, the following procedures apply:

? ? Equipment replacement is not required.
? ? Adjust orifice gas pressure to the appropriate value listed in the tables on page 3-8 by turning the gas valve "adjustment screw".
? ? After adjustment, replace the adjustment-screw cover.

When converting from G20 (or G25) gas to G31 propane (or vice-versa), the following procedures apply:

? ? Burner orifices and pilot orifice **MUST** be replaced.
? ? Adjust orifice gas pressure to the appropriate value listed in the tables on page 3-8 by turning the gas-valve adjustment screw.
? ? After adjustment, replace the adjustment-screw cover.
? ? Factory **MUST** be notified so the conversion can be documented and a new rating plate can be sent out.

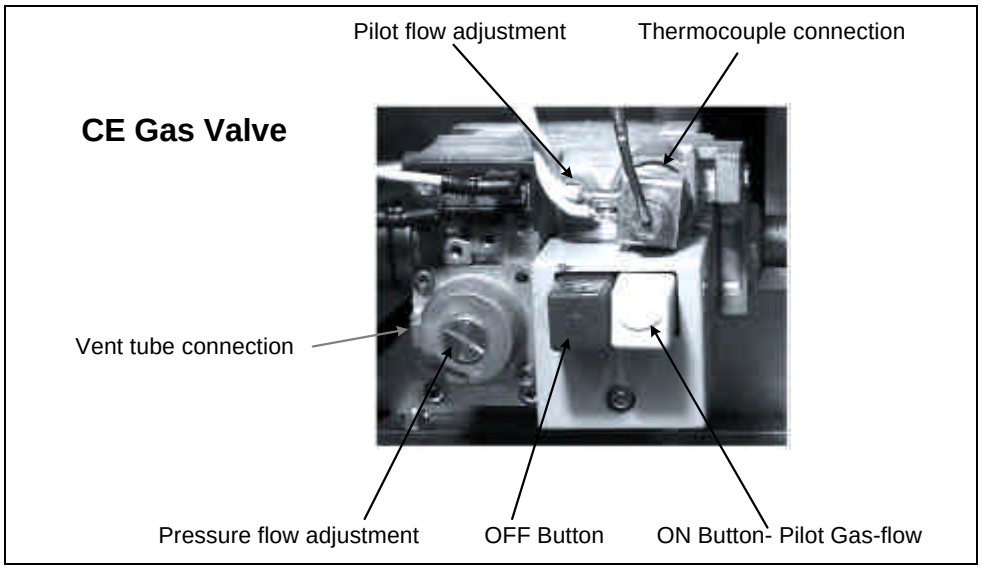
3.6.2 Gas Conversion Procedures (cont.)

When converting from G20 (20 mbar) to G25 (25 mbar), or vice-versa, or G31 (37 mbar) to G31 (50 mbar), the following procedures apply:

? ? Check pilot-adjustment and adjust as necessary.
? ? Other adjustments are not necessary.

Conversion from one gas family to another (i.e. changing from natural gas to propane) requires special components. Obtain the necessary components using the cross-reference in Section 3.8, Gas Conversion Components.

Conversions can only be executed by qualified, factory-authorized personnel.



Use the following component information to convert from natural gas to propane and vice-versa.

Natural Gas to Propane Components		**Propane To Natural Gas Components**	
REF	**DESCRIPTION**	**REF**	**DESCRIPTION**
810-2400	Pilot orifice (16LP)	810-0811	Pilot orifice (26N)
810-2059	Burner orifice (diameter: 1.51 mm)†	810-2060	Burner orifice (diameter: 2.40 mm)†
New Rating Plate	**Contact factory at time of conversion.**	New Rating Plate	**Contact factory at time of conversion.**
†Burner orifices listed are for fryers operating at altitudes of 610 meters or less. For altitudes greater than 610 meters, contact the factory for the correct orifice size.			

3.7 Electrical Connections

The fryer when installed must be electrically grounded in accordance with local codes, or in the absence of local codes, with the appropriate national or European Community (CE) standards.

⚠ DANGER

This fryer is equipped with a three-prong (grounding) plug for protection against electrical shock and must be plugged directly into a properly grounded, three-prong receptacle. DO NOT CUT, REMOVE, OR OTHERWISE BYPASS THE GROUNDING PRONG ON THIS PLUG!

The rating plate and wiring diagram are located inside the front door. The fryer is equipped with a 230VAC single-phase 50-hertz system (International/CE). Do not cut or remove the ground prong from the power cord plug. Do not attempt to use the fryer during a power outage.

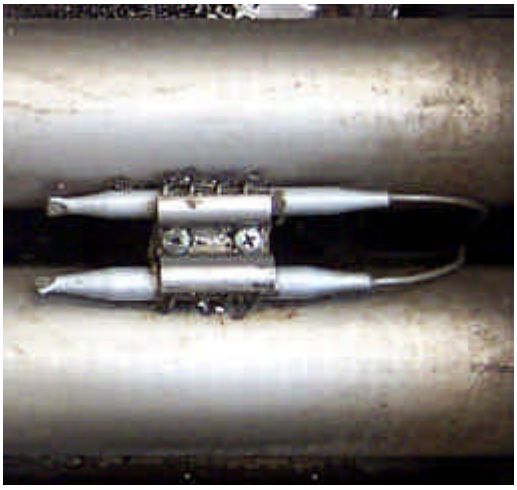
⚠ DANGER

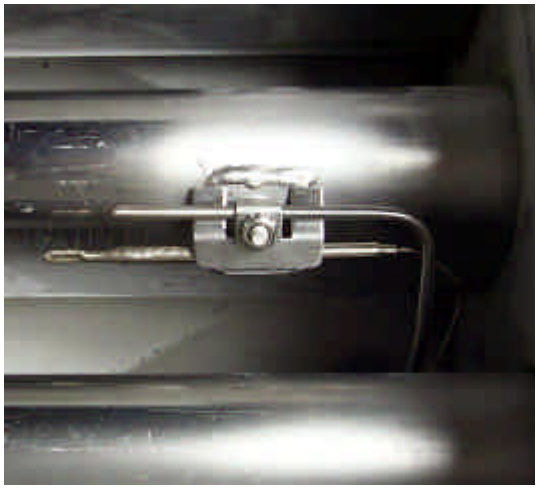
This appliance requires electrical power for operation. Place the gas control valve in the OFF position in case of a prolonged power outage. Do not attempt to operate this appliance during a power outage.

4.1 Initial Start-up

⚠ WARNING
The on-site supervisor is responsible for ensuring that operators are made aware of the inherent hazards of operating a hot oil frying system, particularly the aspects of system operation, oil filtration, draining and cleaning procedures.

Cleaning: New units are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process, then coated lightly with oil. Before any food preparation, wash thoroughly with hot, soapy water to remove any film residue and dust or debris then rinse out and wipe dry. Also wash any accessories shipped with the unit. Close the drain valve completely and remove the crumb screen covering the heating tubes. Ensure the screws holding the thermostat and high-limit control sensing bulbs into the frypot are tight.





Typical high-limit/sensor probe locations and mounting hardware.

⚠ CAUTION
Do not bang fry baskets or other utensils on the fryer's joiner strip. The strip is present to seal the joint between the frypot. Banging fry baskets on the strip to dislodge shortening will distort the strip, adversely affecting its fit. It is designed for a tight fit and should only be removed for cleaning.

⚠ DANGER
Never operate this appliance with an empty frypot. The frypot must be filled with water or cooking oil/shortening before lighting the burners. Failure to do so will damage the frypot and may cause a fire.

4.1.1 Pilot Lighting Procedures

Initial Pilot Lighting: All Dean fryers are tested, adjusted and calibrated to sea level conditions before leaving the factory. Adjustments to assure proper operation of pilot may be necessary on installation to meet local conditions, low gas pressure, differences in altitude and variations in gas characteristics. These adjustments correct possible problems caused by rough handling or vibration during shipment, and are to be performed only by qualified service personnel. These adjustments are the responsibility of the customer and/or the dealer and are not covered by the Dean warranty.

The inlet pipe at the lower rear of the fryer brings incoming gas to the pilot safety control valve, then to the pilot and main burners. The pilot is located high in the cabinet, at the base of the frypot.

⚠ WARNING
When checking for burner ignition or performance, do not get too close to the burners. Slow ignition can cause possible flashback, increasing the potential for facial and body burns.

Ensure that the following steps are done in sequence before lighting or re-lighting the pilot:

1. Turn off the manual shut-off valve on the incoming service line.

2. Turn the operating thermostat "OFF".

3. Depress the Pilot Off button (red) on the safety control valve to turn "OFF".

4. Wait at least 5 minutes for any accumulated gas to disperse.

5. Fill the frypot with oil or water to the bottom OIL LEVEL line scribed on the frypot back. Ensure heating tubes are covered in liquid prior to engaging burners.

6. Open the manual shut-off valve on the incoming service line.

7. Apply a lighted match or taper to the pilot burner head. (If fryer is equipped with a piezo ignitor, go to Step 8).

8. Press the white pilot light button on the gas valve and hold approximately 45 seconds to 1 minute, until the pilot stays lit. (If fryer is equipped with a piezo ignitor, press and hold the white pilot light button, then repeatedly press the piezo ignitor button until the pilot lights. Release the white button after approximately 45 seconds to 1 minute.)

9. If the pilot does not stay lit, depress the white pilot light button and re-light the pilot, holding the button in longer before releasing. Trapped air may necessitate re-lighting the pilot several times until a constant gas flow is attained.

10. When the pilot stays lit, release the white pilot light button.

11. Turn the thermostat to any "ON" setting and ensure the main burner ignites from the pilot.

4.1.2 Pilot Lighting Procedures, Electronic Ignition Systems

⚠ WARNING
Never use a match or taper to light pilot on this ignition system.

1. Turn gas "ON".

2. Turn electric power "ON" with the appropriate rocker switch or controller/computer.

3. The ignition module will energize the pilot gas supply and the ignitor. The ignitor spark will ignite the pilot gas. The presence of the pilot flame is then proved by a flame sensor, which sends a signal to the main gas supply, opening the valve. The operating thermostat or computer/controller controls the fryer after ignition.

⚠ WARNING
In the event of prolonged power failure, the ignition module will shut down and lock out the system. Turn the unit power "OFF" and them back "ON" after power has been re-established.

4. If the pilot flame fails, the ignition module will shut down and lock out the system. To restart, turn the electric power "OFF", wait approximately 5 minutes for the system to recycle itself, then turn the power "ON" again. Repeat Steps 1-3.

4.2 Boil-Out Procedure

⚠ DANGER
Never leave the fryer unattended during the boil-out process. If the boil-out solution boils over, turn the fryer off immediately and let the solution cool for a few minutes before resuming the process. To lessen the chance of boil over, turn the fryer's gas valve knob to the PILOT position occasionally.

⚠ WARNING
Do not drain boil-out solution into a shortening disposal unit, a built-in filtration unit, or a portable filter unit. These units are not intended for this purpose, and will be damaged by the solution.

⚠ DANGER
Remove all drops of water from the frypot before filling with cooking oil or shortening. Failure to do so will cause spattering of hot liquid when the oil or shortening is heated to cooking temperature and may cause injury to nearby personnel.

4.2 Boil-Out Procedure (cont.)

A. Pour cleaning solution into the frypot and add water to the bottom OIL LEVEL line scribed in the back of the frypot.

B. Operating thermostat-equipped fryers: Set dial/temperature controller to 107ºC (225°F), just above that of boiling water.

C. Filtration/Boil-Mode equipped fryers: Turn fryer power switch to "ON". Press the fryer-reset switch (if applicable).

⚠ CAUTION
If the pilot and main burner go out, the fryer(s) MUST be left completely shut down at least 5 minutes before lighting.

D. The main burner will ignite.

E. When the solution nears boiling point, reset the temperature controller to 93ºC (200°F).

F. The burners should shut off just as the water starts to boil.

⚠ CAUTION
Do not leave fryer unattended. The boil-out solution may foam and overflow if fryer is left unattended. Press ON/OFF switch to the "OFF" position (Filtration/Boil-Mode equipped fryers) or reduce temperature (Operating Thermostat equipped fryers) to control this condition.

G. The burners will heat the boil-out solution to a simmer. Simmer the solution for approximately 45 minutes. Wearing protective gloves, scrub the sides of the frypot and the tubes with the L-shaped Teflon brush, being careful not to disturb the temperature sensing probes and the high-limit thermostat.

H. Do not allow the water level to decrease below the bottom OIL LEVEL line in frypot during boil-out operation.

⚠ WARNING
Water or boil-out solution MUST not be allowed to drain into the filter pan or filter system. Irreversible damage will result if water is allowed into the system.

I. Operating Thermostat equipped fryers: After boil out is complete, turn the thermostat dial to "OFF". Filtration/Boil-Mode equipped fryers: After boil out is complete, turn the boil out and fryer switches to "OFF". Drain the solution from the frypot. Place a metal stockpot of sufficient size to safely hold the entire contents of the frypot under the drain port to collect the water/boil-out solution. Do not allow water or boil-out solution to drain into the filter pan. The filter pump is not designed for water operation, and will be irreparably damaged (see warning statement above).

4.2 Boil-Out Procedure (cont.)

J. Close the drain, add fresh water (without boil-out solution) and wash all surfaces of the frypot. Drain again.

K. Refill the frypot with fresh water and vinegar to neutralize any residual boil-out solution. Wash all surfaces of the frypot. Drain completely and wipe down all surfaces of the frypot to completely remove all water.

Computer-equipped fryers: <u>See computer manual for boil-out programming and follow the above procedures for boil-out.</u>

⚠ DANGER
Do not go near the area directly over the flue outlet while the fryer is operating.

Always wear oil-proof, insulated gloves when working with the fryer filled with hot oil.

Always drain hot oil into a metal stockpot of sufficient size to safely hold the entire contents of the frypot.

4.3 Final Preparation

⚠ WARNING
NEVER set a complete block of solid shortening on top of heating tubes. To do so will damage the heating tubes and frypot, and void the warranty.

4.3.1 Filling Fryer with Cooking Oil/Shortening

A. When using a liquid shortening (cooking oil), fill the fryer to the bottom OIL LEVEL line scribed into the back of the frypot.

B. When using a solid shortening, first melt it in a suitable container, or cut it into small pieces and pack it below the heat tubes, between the tubes and on top of the tubes, leaving no air spaces around the tubes. Do not disturb or bend the sensing bulbs.

C. <u>Thermatron with Melt Cycle Option Enabled</u>: Set Thermatron to the working temperature. The burners will cycle on approximately 5 seconds, and off for approximately 15 seconds until the temperature reaches 66°C (150°F). The Thermatron will then switch to normal operation.

4.3.1 Filling Fryer with Cooking Oil/Shortening (cont.)

D. Operating Thermostat: Turn the burners "ON" for about 10 seconds, "OFF" for a minute, etc., until the shortening is melted. If you see smoke coming from the shortening while melting this way, shorten the "ON" cycle and lengthen the "OFF" cycle. Smoke indicates potential scorching of the shortening, which will shorten its useful life.

E. Compu-Fry Computer: Press the computer on/off switch to "ON". The burners will initially operate in the MELT CYCLE mode until the shortening reaches 82°C (180°F). It will then automatically switch to normal operation.

F. When the frypot is filled and the shortening is melted, carefully replace the crumb screen over the heat tubes. Wear oil-proof insulated gloves to avoid the potential for burn injury when placing crumb screen in frypot.

G. Before starting operation, set the Thermatron/Operating Thermostat or program the computer to the probable working temperature and wait for the temperature to stabilize.

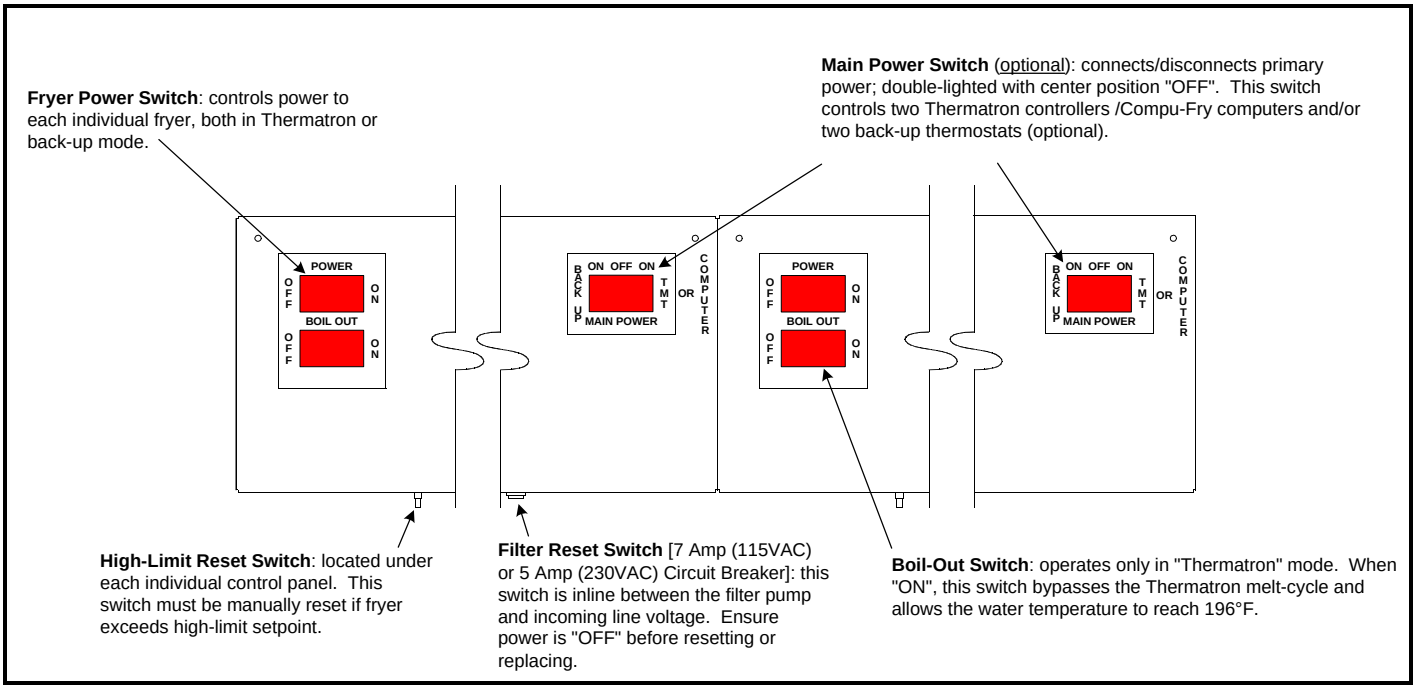
For additional computer instructions, see computer manual.

5.1 Operating Fryers with Thermatron Controllers

Many Decathlon fryers use a solid-state temperature controller, or Thermatron® controller instead of a computer or basic thermostat. A Thermatron system incorporates a temperature-control circuit board, a potentiometer, and a temperature probe. This system is more accurate and more reliable than a standard thermostat, and less expensive than a computer controller. Various switch options are available on Decathlon frying systems. Two typical configurations on current production systems are illustrated below (switch locations will vary from model to model).

Thermatron Temperature Controller

Configuration #1


Fryer Power Switch: controls power to each individual fryer, both in Thermatron or back-up mode.
Main Power Switch (optional): connects/disconnects primary power; double-lighted with center position "OFF". This switch controls two Thermatron controllers /Compu-Fry computers and/or two back-up thermostats (optional).
POWER
OFF
ON
BOIL OUT
OFF
ON
ON OFF ON
BACK UP
MAIN POWER
TMT
OR
COMPUTER
High-Limit Reset Switch: located under each individual control panel. This switch must be manually reset if fryer exceeds high-limit setpoint.
Filter Reset Switch [7 Amp (115VAC) or 5 Amp (230VAC) Circuit Breaker]: this switch is inline between the filter pump and incoming line voltage. Ensure power is "OFF" before resetting or replacing.
Boil-Out Switch: operates only in "Thermatron" mode. When "ON", this switch bypasses the Thermatron melt-cycle and allows the water temperature to reach 196°F.

5.1 Operating Fryers with Thermatron Controllers (cont.)

MAIN POWER SWITCH – connects/disconnects primary power; double-lighted with center position "OFF". One main switch controls two Thermatron controllers/Compu-Fry computers and/or two back-up thermostats. When the Main Power Switch is in the center position, power is removed from the two fryers controlled by the Thermatron controller/Compu-Fry computer or back-up thermostats. When the Main Power Switch pressed to the right, power is supplied to the Thermatron/Compu-Fry computer of each fryer. When pressed to the left, power is supplied to the back-up thermostat of each fryer. The back-up thermostat should be left in the "OFF" position when not in use (**Newer fryers may not have the backup control option**).

INDIVIDUAL FRYER POWER SWITCH – this switch controls power to the individual fryer, whether the fryer is in the Thermatron/Computer mode or the back-up mode. When the power switch is in the "ON" position, the indicator light will be lighted when calling for heat. The power switch only removes power from the temperature control circuit (Thermatron and Back-Up Thermostat). The power switch should be in the "OFF" position during filtering.

BOIL-OUT SWITCH – **this only operates when in the Thermatron mode**. When the Boil-Out switch is "ON", it will bypass the Thermatron Melt Cycle, and allow the water temperature to reach approximately 196°F.

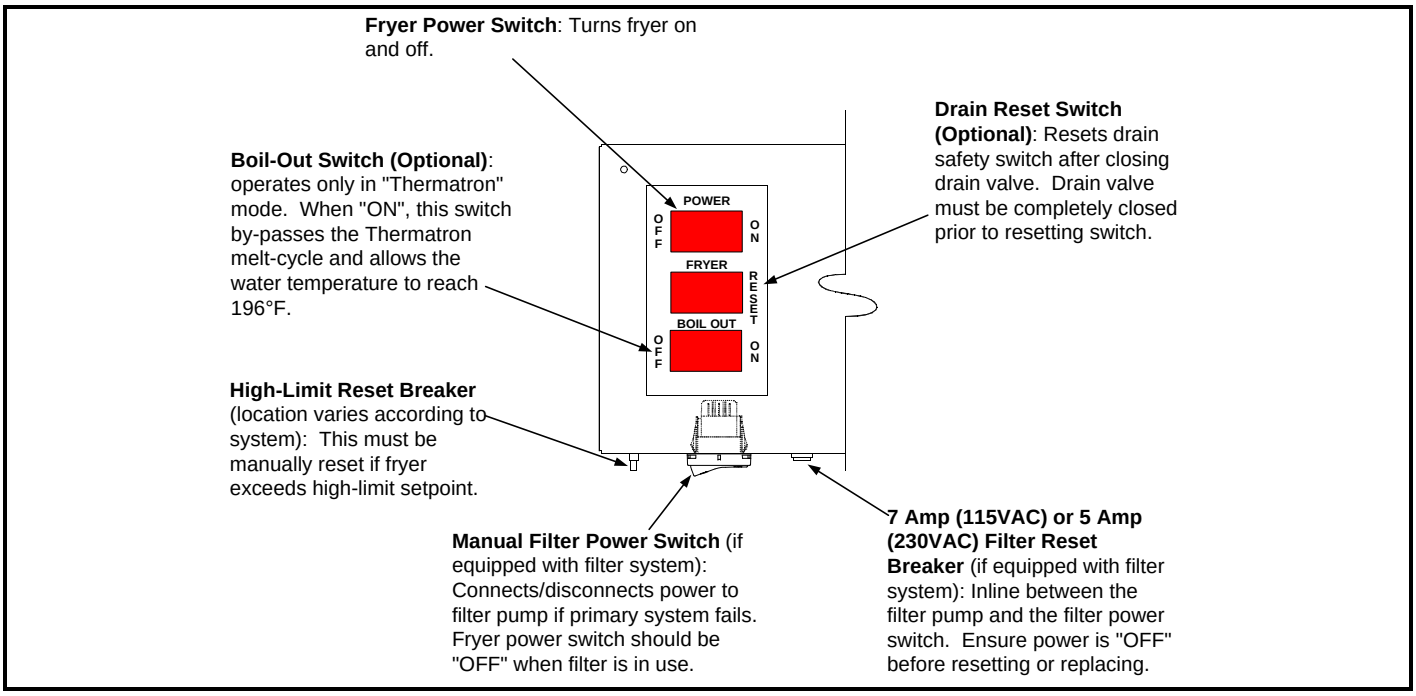
HIGH-LIMIT RESET – Located under control panel. Must be manually reset if the fryer exceeds high-limit setpoint.

FILTER RESET BREAKER (7 Amp Circuit Breaker- 120VAC or 5 Amp Circuit Breaker-230VAC) – the breaker is in line between the filter switch and the pump. Ensure filter power is off prior to resetting or replacing.

5 AMP (115VAC) or 2 AMP (230VAC) FUSE – each fryer circuit is protected by a 5 amp (115VAC) or 2 amp (230VAC) fuse located under the control panel.

5.1 Operating Fryers with Thermatron Controllers (cont.)

Configuration #2


Fryer Power Switch: Turns fryer on and off.
Drain Reset Switch (Optional): Resets drain safety switch after closing drain valve. Drain valve must be completely closed prior to resetting switch.
Boil-Out Switch (Optional): operates only in "Thermatron" mode. When "ON", this switch by-passes the Thermatron melt-cycle and allows the water temperature to reach 196°F.
POWER
OFF
ON
FRYER
RESET
BOIL OUT
OFF
ON
High-Limit Reset Breaker (location varies according to system): This must be manually reset if fryer exceeds high-limit setpoint.
Manual Filter Power Switch (if equipped with filter system): Connects/disconnects power to filter pump if primary system fails. Fryer power switch should be "OFF" when filter is in use.
7 Amp (115VAC) or 5 Amp (230VAC) Filter Reset Breaker (if equipped with filter system): Inline between the filter pump and the filter power switch. Ensure power is "OFF" before resetting or replacing.

FRYER POWER SWITCH – This switch turns the fryer on and off. When the power switch is in the "ON" position, the indicator light will be lit when calling for heat.

BOIL-OUT SWITCH –**operates only when in the Thermatron mode**. When the Boil-Out switch is "ON", it will bypass the Thermatron melt cycle, and allow the water temperature to reach approximately 196°F.

DRAIN RESET SWITCH (Optional) – Resets drain safety switch after draining the fryer. Drain valve must be closed completely before resetting switch.

MANUAL FILTER POWER SWITCH (if equipped with filter system**)** – Controls power to the filter pump in the event the primary system fails. **Fryer Power Switch should be in "OFF" position when in use.**

HIGH-LIMIT RESET –Located under control panel. Must be manually reset if the fryer exceeds high-limit setpoint.

FILTER RESET BREAKER (7 Amp Circuit Breaker- 120VAC or 5 Amp Circuit Breaker-230VAC) – the breaker is inline between the filter switch and the pump. Ensure filter power is off prior to resetting or replacing.

5 AMP (115VAC) or 2 AMP (230VAC) FUSE – each fryer circuit is protected by a 5 amp (115VAC) or 2 amp (230VAC) fuse located under the control panel.

DECATHLON SERIES GAS FRYERS (CE)
CHAPTER 6: PREVENTATIVE MAINTENANCE

6.1 General

⚠ DANGER
Never attempt to clean the fryer during the cooking process or when the frypot is filled with hot oil/shortening. If water comes in contact with oil/shortening heated to cooking temperature, it will cause spattering of the oil/shortening, which can result in severe burns to nearby personnel.

Any equipment works better and lasts longer when maintained properly and kept clean. Cooking equipment is no exception. The Decathlon Series gas fryer should be kept clean during the working day, and thoroughly cleaned at the end of each day. Below are recommendations for daily, weekly and periodic preventative maintenance.

6.1.1 Daily

⚠ WARNING
Use a commercial grade cleaner formulated to effectively clean and sanitize food-contact surfaces. Read the directions for use and precautionary statements before use. Particular attention must be paid to the concentration of cleaner and the length of time the cleaner remains on the food-contact surfaces.

A. Remove and wash all removable parts.

B. Clean all exterior surfaces of the cabinet. Do not use cleaners, steel wool, or any other abrasive material on stainless steel.

C. Filter the cooking oil and replace if necessary. The oil should be filtered more frequently when under heavy use.

6.1.2 Weekly

A. Completely drain the oil from the fryer into a metal stockpot of sufficient size to safely hold the entire contents of the frypot for disposal. Do not use a glass or plastic container.

B. Clean the frypot by following boil-out procedures in Chapter 4.2.

⚠ CAUTION
Never allow water to boil down and expose the heating tubes. Frypot damage will result.

6.1.3 Periodic/Annual

This appliance should be inspected and adjusted periodically by qualified service personnel as part of a regular kitchen maintenance program.

Frymaster/Dean recommends that this appliance be inspected at least annually by a Factory Authorized Service Technician as follows:

?? Inspect the cabinet inside and out, front and rear for excessive oil build-up and/or oil migration.

?? Verify that the flue opening is not obstructed by debris or accumulations of solidified oil or shortening.

?? Verify that burners and associated components (i.e. gas valves, pilot assemblies, ignitors, etc.) are in good condition and functioning properly. Inspect all gas connections for leaks and verify that all connections are properly tightened.

?? Verify that the burner manifold pressure is in accordance with that specified on the appliance's rating plate.

?? Verify that the temperature and high-limit probes are properly connected, tightened and functioning properly, and that mounting hardware and probe guard are present and properly installed.

?? Verify that component box components (i.e. computer/controller, transformers, relays, interface boards, etc.) are in good condition and free from oil migration build-up and other debris. Inspect the component box wiring and verify that connections are tight and that wiring is in good condition.

?? Verify that all safety features (i.e. drain safety switches, reset switches, etc.) are present and functioning properly.

?? Verify that the frypot/cookpot is in good condition and free of leaks and that the frypot/cookpot insulation is in serviceable condition. Verify that the frypot tube diffusers are present and in good condition (i.e. no visible deterioration or damage).

?? Verify that wiring harnesses and connections are tight and in good condition.

6.1.4 Stainless Steel Care

⚠ WARNING
DO NOT let water splash into the tank of hot oil. It will splatter and can cause severe burns.

All stainless steel fryer cabinet parts should be wiped regularly with hot, soapy water during the day, and with a liquid cleanser designed for stainless steel at the end of each day.

A. Do not use steel wool, abrasive cloths, cleansers or powders.

B. Do not use a metal knife, spatula or any other metal tool to scrape stainless steel! Scratches are almost impossible to remove.

C. If it is necessary to scrape the stainless steel to remove any encrusted materials, soak the area first to soften the deposit, then use a wood or nylon scraper only.

DECATHLON SERIES GAS FRYERS (CE)
CHAPTER 7: TROUBLESHOOTING

7.1 General

⚠ DANGER
Hot cooking oil/shortening will cause severe burns. Never attempt to move this appliance when filled with hot cooking oil/shortening or to transfer hot cooking oil/shortening from one container to another.

⚠ DANGER
This equipment should be unplugged when servicing, except when electrical circuit tests are required. Use extreme care when performing such tests.

This appliance may have more than one electrical power supply connection point. Disconnect all power cords before servicing.

Inspection, testing and repair of electrical components should be performed by an authorized service agent only.

The problems and possible solutions covered are those most commonly encountered. To troubleshoot, perform the test set-up at the beginning of each condition. Follow each step in sequence.

7.2 Pilot Burner Malfunction

A. Pilot will not ignite; no evidence of gas at pilot burner.

1. Check that gas valve is open and gas is present at the gas valve.

2. Check pilot burner orifice for dirt or lint.

3. Authorized Service Agent Only: Remove pilot burner gas-supply line and check for contamination; blow out if necessary, then reinstall.

B. Pilot burner ignites but will not remain lit when gas valve manual knob is released.

1. Check that thermocouple lead is properly screwed into thermocouple connection bushing on gas valve.

2. Remove end of thermocouple lead from thermocouple connection bushing and clean with fine sandpaper or emery cloth.

3. Authorized Service Agent Only: Pilot flame may be too high or too low. Adjust pilot flame adjustment screw so that pilot flame extends about 19-mm (3/4-inch) above the top of the pilot burner.

7.2 Pilot Burner Malfunction (cont.)

4. Check all connections for cleanliness and security.

C. Pilot flame of proper size, but is unstable. Flame wavers and does not envelop the thermocouple completely at all times.

1. Check for drafts that might be caused by air conditioning equipment or make-up air apparatus. Turn air-moving equipment off and recheck the pilot.

7.3 Main Burner Malfunctions

A. Main burner will not come "ON"; gas not detected at main burner.

1. Check that the gas valve is open.

2. Check that the pilot is ignited and is operating properly.

3. Authorized Service Agent Only: Check the high-limit switch for continuity.

4. Authorized Service Agent Only: Check the combination gas valve and replace if defective.

B. Main burner flames are small and appear lazy; shortening does not come up to temperature quickly.

1. Authorized Service Agent Only: Check gas pressure at the pressure tap of the gas valve. Use dial type or standard water-type U-gauge manometer. With burner in operation, the pressure should be 10 mbar (4" W.C.) for natural gas, and 27.5 mbar (11" W.C.) for propane. If not, remove the pressure regulator adjustment cover. Use screwdriver to turn the adjusting screw for proper pressure. Replace cover, re-check pressure and re-install pressure tap plug.

C. Signs of excessive temperature; shortening scorches and quickly becomes discolored.

1. Check operating thermostat. May be out of adjustment or calibration. Recalibrate if necessary.

2. Check gas pressure as outlined above.

3. Shortening used is of inferior quality and/or shortening has been used too long. Replace shortening.

4. Ensure frypot is clean when refilling with new shortening.

7.3 Main Burner Malfunctions (cont.)

D. Fryer will not reach the temperature setting and/or runs erratically.

1. Incorrect location of sensor probe or defective temperature sensor.

2. Loose wiring/wire connection

E. Fryer shortening temperature cannot be controlled; fryer runs at high-limit temperature.

1. Defective operating thermostat or temperature probe; Call Authorized Service Agent.

7.4 Thermatron Calibration

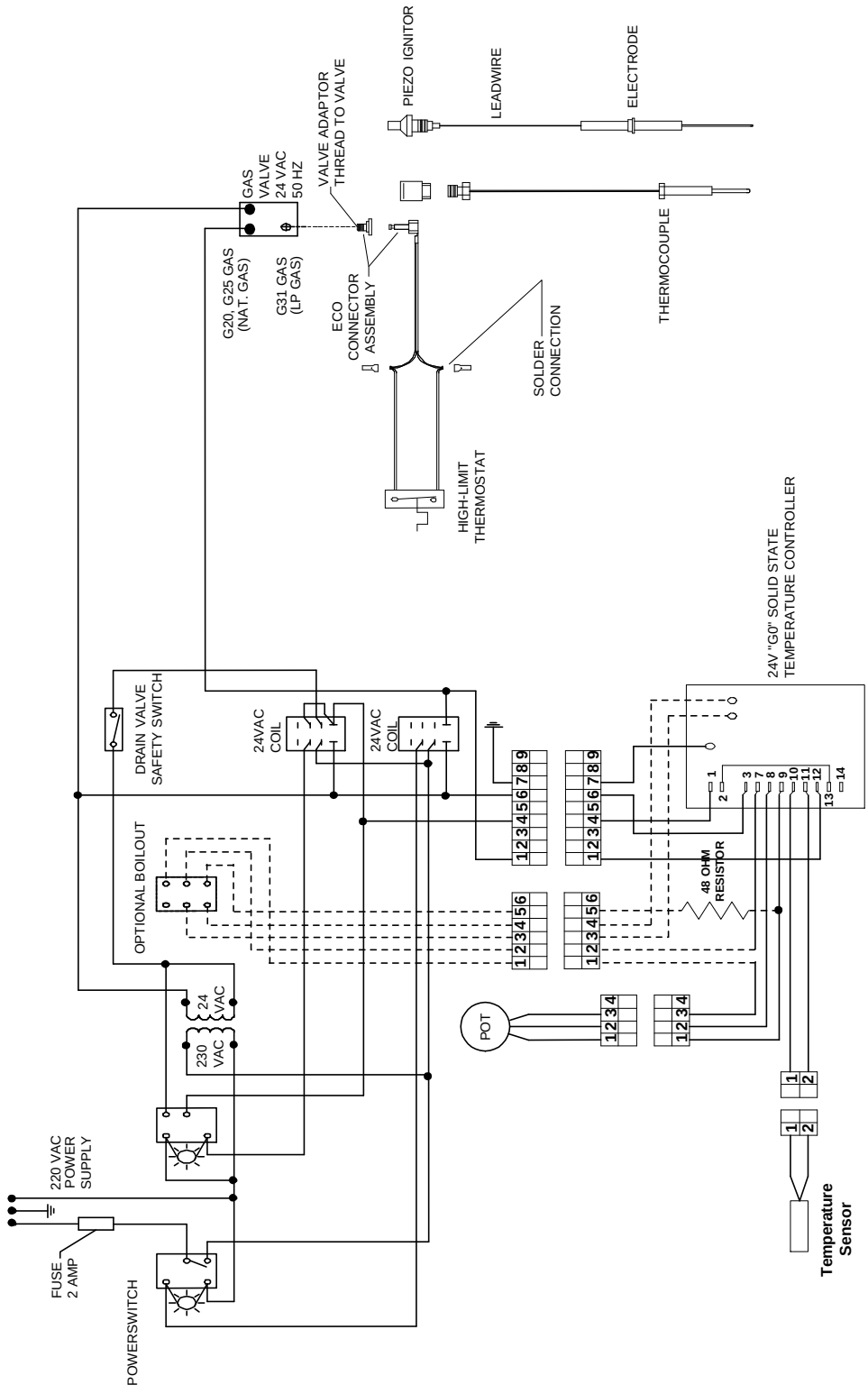
The Thermatron controller maintains a specific oil/shortening temperature through a sensing probe mounted in the frypot. If the actual temperature of the cooking oil varies from the controller dial setting, loosen the knob setscrew and rotate the knob until it agrees with that of the actual oil temperature. When obtaining actual oil temperature, ensure that the thermometer is inserted within one-inch of the frypot-mounted probe. If proper calibration cannot be achieved, contact Authorized Service Agent for repair.

Control Knob Setscrew (counter-set in knob)

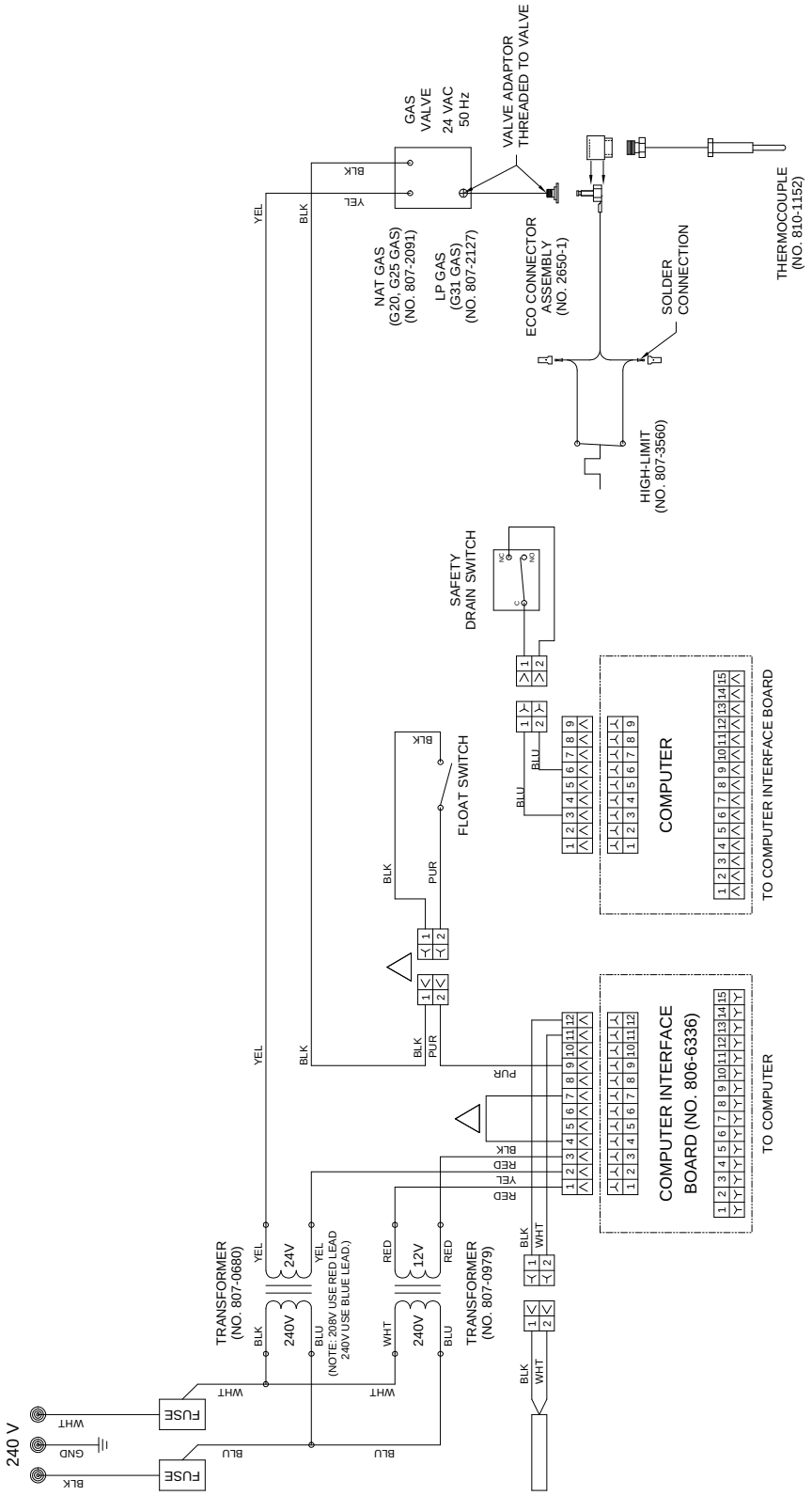
Thermatron Probe

7.5 Wiring Diagrams

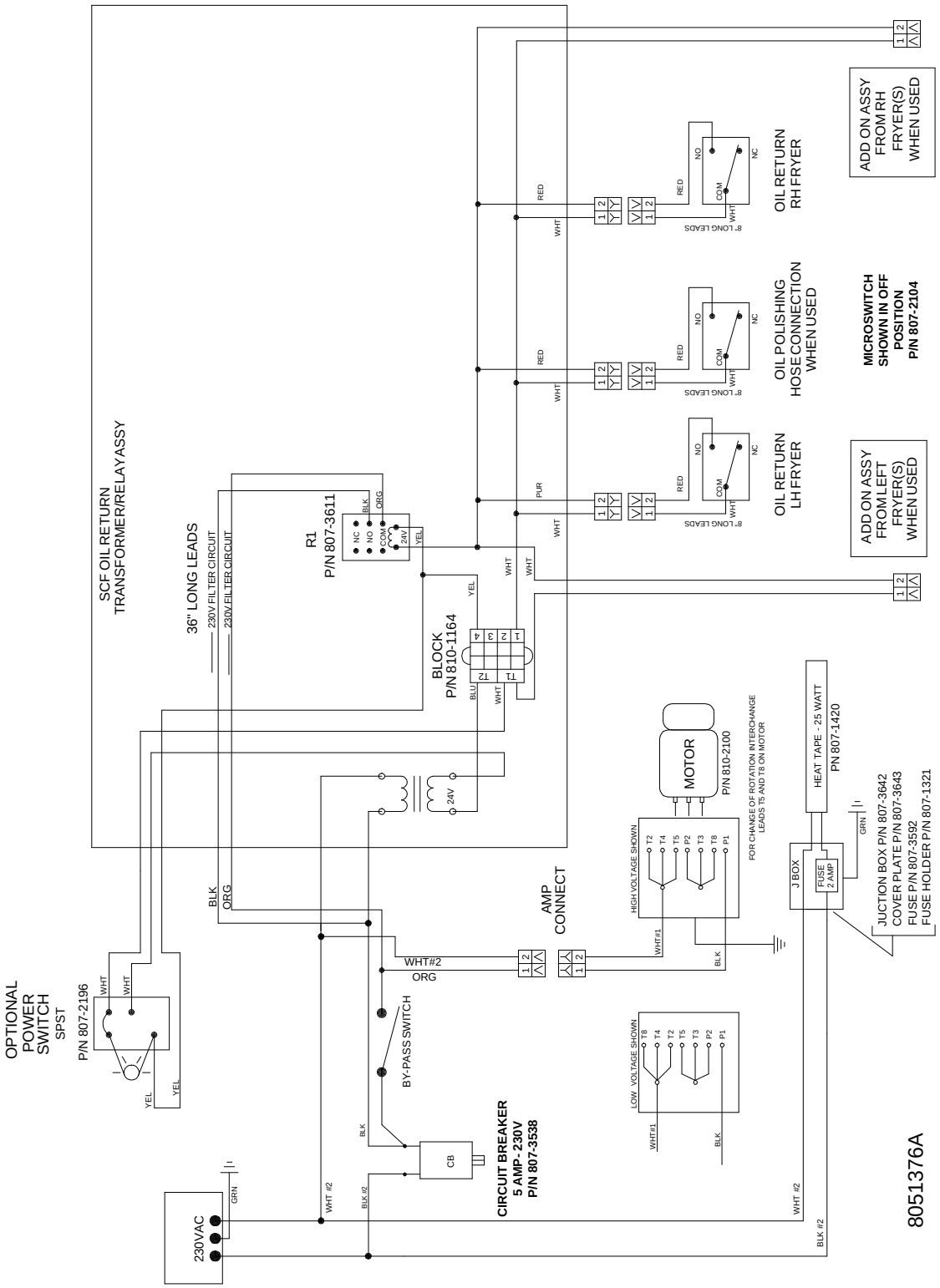
7.5.1 Decathlon D-50G and D-60G- Thermatron Controls- CE Only



7.5.2 Decathlon D-50G and D-60G- Computer- CE Only



7.5.3 UFF Filtration- Typical Wiring



7.6 Recommended Spare Parts

Commonly replaced parts in older Decathlon Series gas fryers are:

Gas Valve- G20/G25 (CE)- 807-2091
Gas Valve- G31 (CE)- 807-2127
High-Limit Thermostat- 807-3560
Thermocouple- 810-1152
Temperature Sensor Probe, Thermatron (D20, D50)- 106-1757SP
Temperature Sensor Probe, Thermatron (D60, D80)- 106-1260SP
Temperature Sensor Probe, Dean Compu-Fry Computer- 106-1541SP
Thermatron Board- 807-3722
Power Switch- 807-3574
Boil-Out Switch (6-Terminal)- 807-3579
Fryer Reset Switch (Momentary)- 807-3576
Manual Filter Power Switch- 807-3580
Ignition Module- 807-3563
Ignitor/Pilot Assembly- Natural (Includes Ignition Cable)- 106-1839SP
Ignitor/Pilot Assembly- LP- 807-1553
Ignition Cable- 807-1315
Sensor Wire- 106-1645SP
Flame Sensor- 807-1310

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